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=> s (PCR or polymerase(w)chain) and LNA
L1          43 (PCR OR POLYMERASE(W) CHAIN) AND LNA

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2           33 DUP REM L1 (10 DUPLICATES REMOVED)

=> d 1-33 ti

L2   ANSWER 1 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   G protein-coupled receptor (GPCR) microarrays for determination of GPCR
     gene expression profiles and uses in drug and toxin screening and
     diagnostics

L2   ANSWER 2 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   Transporter microarrays for the determination of transporter gene
     expression profiles and uses in drug and toxin screening and diagnostics

L2   ANSWER 3 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   Ion channel microarrays for the determination of ion channel gene
     expression profiles and uses in drug and toxin screening and diagnostics

L2   ANSWER 4 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   Biological material chip with immobilized binding partners

L2   ANSWER 5 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   LNA helper probes for detection of a single nucleotide
     polymorphism by a capture oligonucleotide

L2   ANSWER 6 OF 33     MEDLINE
TI   p16INK4a loss and sensitivity in KSHV associated primary effusion
     lymphoma.

L2   ANSWER 7 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   Genotyping of the apolipoprotein B R3500Q mutation using immobilized
     locked nucleic acid capture probes

L2   ANSWER 8 OF 33     MEDLINE
TI   [Detection of HHV8 latent nuclear antigen by immunohistochemistry. A new
     tool for differentiating Kaposi's sarcoma from its mimics].
     Detection de l'antigene LNA1 de l'HHV8 par immunohistochimie.

L2   ANSWER 9 OF 33  CAPLUS  COPYRIGHT 2002 ACS
TI   Down-regulation of VEGF mRNA expression by 2'-O,4'-C-ethylene-bridged
     nucleic acid (ENA) antisense oligonucleotides and investigation of
     non-target gene expression
```

L2 ANSWER 10 OF 33 MEDLINE
TI Single nucleotide polymorphism genotyping using short, fluorescently labeled locked nucleic acid (**LNA**) probes and fluorescence polarization detection.

L2 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Method for selectively isolating a nucleic acid

L2 ANSWER 12 OF 33 MEDLINE
TI Kaposi's sarcoma-associated herpesvirus can productively infect primary human keratinocytes and alter their growth properties.

L2 ANSWER 13 OF 33 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI SoxR-dependent response to oxidative stress and virulence of Erwinia chrysanthemi: The key role of SufC, an orphan ABC ATPase.

L2 ANSWER 14 OF 33 MEDLINE DUPLICATE 1
TI HHV-8 infection in patients with AIDS-related Kaposi's sarcoma in Brazil.

L2 ANSWER 15 OF 33 MEDLINE
TI Simultaneous occurrence of Epstein-Barr virus associated Hodgkin's disease and HHV-8 related multicentric Castleman's disease: a fortuitous event?.

L2 ANSWER 16 OF 33 MEDLINE
TI Immunohistochemical assessment of human herpesvirus 8 infection in primary central nervous system large B cell lymphomas.

L2 ANSWER 17 OF 33 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Kaposi's sarcoma-associated herpesvirus (KSHV/HHV-8) infection of lymph nodes from HIV positive patients.

L2 ANSWER 18 OF 33 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI High throughput multiplex genotyping using chimeric **LNA** (Locked Nucleic Acids)/DNA oligos immobilized on a polymer microchip.

L2 ANSWER 19 OF 33 MEDLINE DUPLICATE 2
TI Detection and characterization of human herpesvirus-8-infected cells in bone marrow biopsies of human immunodeficiency virus-positive patients.

L2 ANSWER 20 OF 33 MEDLINE
TI Colocalization of the viral interleukin-6 with latent nuclear antigen-1 of human herpesvirus-8 in endothelial spindle cells of Kaposi's sarcoma and lymphoid cells of multicentric Castleman's disease.

L2 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI One-step sample preparation and detection of nucleic acids in complex biological samples using locked nucleic acid primers

L2 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Detection of mutations in genes by allele-specific **PCR** using primers containing ribose analogs that limit conformational flexibility

L2 ANSWER 23 OF 33 MEDLINE DUPLICATE 3
TI Hot-spot variations of Kaposi's sarcoma-associated herpesvirus latent nuclear antigen and application in genotyping by **PCR**-RFLP.

L2 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Preparation of locked nucleoside analogs-containing oligodeoxyribonucleotide duplexes as substrates for nucleic acid polymerases

L2 ANSWER 25 OF 33 MEDLINE
TI Distribution of human herpesvirus-8 latently infected cells in Kaposi's sarcoma, multicentric Castleman's disease, and primary effusion lymphoma.

L2 ANSWER 26 OF 33 MEDLINE DUPLICATE 4
TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of **PCR** amplicons to photoimmobilized locked nucleic acids.

L2 ANSWER 27 OF 33 MEDLINE
TI Molecular polymorphism of Kaposi's sarcoma-associated herpesvirus (Human herpesvirus 8) latent nuclear antigen: evidence for a large repertoire of viral genotypes and dual infection with different viral genotypes.

L2 ANSWER 28 OF 33 MEDLINE
TI Deregulation of cyclooxygenase and nitric oxide synthase gene expression in the inflammatory cascade triggered by experimental group B streptococcal meningitis in the newborn brain and cerebral microvessels.

L2 ANSWER 29 OF 33 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI cDNA cloning of an adult male putative lipocalin specific to tergal gland aphrodisiac secretion in an insect (Leucophaea maderae.

L2 ANSWER 30 OF 33 MEDLINE DUPLICATE 5
TI Transcriptional analysis of human herpesvirus-8 open reading frames 71, 72, 73, K14, and 74 in a primary effusion lymphoma cell line.

L2 ANSWER 31 OF 33 MEDLINE DUPLICATE 6
TI High expression of HHV-8-encoded ORF73 protein in spindle-shaped cells of Kaposi's sarcoma.

L2 ANSWER 32 OF 33 MEDLINE
TI [The use of B1-**PCR** method for studying the genomic polymorphism involved in malignant growth].
Ispol'zovanie metoda v1-ptsr dlia izucheniia genomnogo polimorfizma pri zlokachestvennom roste.

L2 ANSWER 33 OF 33 MEDLINE
TI [The polymorphism of the tandem repeats in the dystrophin gene in the Ukrainian population].
Polimorfizm tandemnykh povtorov gena distrofina v populiatsii naseleniia Ukrainy.

=> d 21 26 bib ab

L2 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 2000:688401 CAPLUS
DN 133:262258
TI One-step sample preparation and detection of nucleic acids in complex biological samples using locked nucleic acid primers
IN Skouv, Jan
PA Exiqon A/S, Den.
SO PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000056920	A1	20000928	WO 2000-DK128	20000317

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN,

CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1161561 A1 20011212 EP 2000-910584 20000317

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 2002539802 T2 20021126 JP 2000-606779 20000317

US 6303315 B1 20011016 US 2000-528271 20000318

PRAI DK 1999-384 A 19990318

US 1999-127356P P 19990401

WO 2000-DK128 W 20000317

AB A method for simultaneous release and detection of nucleic acids from complex biol. samples is described. The invention relates to the combined use of lysis buffers contg. strong chaotropic agents such as guanidine thiocyanate to facilitate cell lysis and release of cellular nucleic acids and to the use of a novel type of bicyclic nucleotide analogs, locked nucleic acid (**LNA**) to detect specific nucleic acids released during lysis by nucleic acid hybridization. In particular methods are described for the covalent attachment of the catching **LNA**-oligo. Novel methods for sample prepn. of e.g. polyadenylated mRNA species are also presented. The invention further addresses reagents for performing the methods as well as reagents and applications of the method. Chaotropic denaturants are shown to improve the specificity of probe hybridization to a target sequence. This allows the efficient capture of sequences labeled with a locked nucleic acid probe, e.g. for **PCR** . Expts. optimizing hybridization conditions using **LNA** probes in the presence of guanidinium salts are described.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 26 OF 33 MEDLINE DUPLICATE 4

AN 2000012819 MEDLINE

DN 20012819 PubMed ID: 10545058

TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of **PCR** amplicons to photoimmobilized locked nucleic acids.

AU Orum H; Jakobsen M H; Koch T; Vuust J; Borre M B

CS PNA Diagnostics A/S, Ronnegade 2, DK-2100 Copenhagen, Denmark.. oerum@euroconnect.dk

SO CLINICAL CHEMISTRY, (1999 Nov) 45 (11) 1898-905.
Journal code: 9421549. ISSN: 0009-9147.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199911

ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991118

AB BACKGROUND: Individuals carrying the factor V Leiden mutation have been shown to have an increased risk of developing venous thromboembolism. Our aim was to develop an ELISA-like assay to detect the mutation in **PCR**-amplified genomic DNA using novel, high-affinity DNA analogs, termed locked nucleic acids (LNAs). METHODS: **LNA** octamer probes complementary to the factor V wild-type or mutated sequence were covalently attached to individual wells of a microtiter plate.

Biotinylated factor V amplicons were added, and hybridization to the immobilized **LNA** probes was scored colorimetrically using a horseradish peroxidase-anti-biotin Fab conjugate and tetramethylbenzidine substrate. RESULTS: In a prospective study of 53 patients, the assay reproducibly scored both factor V homozygotes and heterozygotes with excellent sensitivity and specificity. All results were in complete agreement with the results obtained with the conventional **PCR** -restriction fragment length polymorphism technique. CONCLUSIONS: The simplicity of the assay and its procedural relatedness to the widely used ELISA format should make it useful for routine factor V testing in the clinical laboratory.

=> d 24-33 bib ab

L2 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1999:216926 CAPLUS
DN 130:252609
TI Preparation of locked nucleoside analogs-containing oligodeoxyribonucleotide duplexes as substrates for nucleic acid polymerases
IN Wengel, Jesper; Nielsen, Poul
PA Exiqon A/S, Den.
SO PCT Int. Appl., 269 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9914226	A2	19990325	WO 1998-DK393	19980914
	WO 9914226	A3	19990805		
	W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002068708	A1	20020606	US 1998-152059	19980911
	CA 2303299	AA	19990325	CA 1998-2303299	19980914
	AU 9890633	A1	19990405	AU 1998-90633	19980914
	EP 1015469	A2	20000705	EP 1998-942516	19980914
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002521310	T2	20020716	JP 2000-511775	19980914
PRAI	DK 1997-1054	A	19970912		
	DK 1997-1492	A	19971219		
	DK 1998-61	A	19980116		
	DK 1998-286	A	19980303		
	DK 1998-585	A	19980429		
	US 1998-88309P	P	19980605		
	DK 1998-750	A	19980608		
	DK 1998-982	A	19980728		
	US 1997-58541P	P	19970912		
	US 1997-68293P	P	19971219		
	US 1998-71682P	P	19980116		
	US 1998-76591P	P	19980303		
	US 1998-83507P	P	19980429		
	US 1998-94355P	P	19980728		

WO 1998-DK393 W 19980914

OS MARPAT 130:252609

AB Bicyclic and tricyclic nucleoside and nucleotide analogs were prepd. as well as oligodeoxyribonucleotides comprising such elements I (B is selected from hydrogen, hydroxy, alkoxy, alkyl, acyloxy, nucleobases, DNA intercalators; P designates the radical position for an internucleoside linkage to a succeeding monomer, or a 5'-terminal group, such internucleoside linkage or 5'-terminal group optionally including the substituent R5; X is selected from O, S, substituted N, substituted C; R1, R1*, R2, R2*, R3, R3*, R4*, R5, R5*, are biradical(s), independently selected from hydrogen, alkyl, alkenyl, alkynyl, hydroxy, alkoxy, alkenyloxy, carboxy, alkoxycarbonyl, alkylcarbonyl, formyl, aryl, aryloxy-carbonyl, aryloxy, arylcarbonyl, heteroaryl, carbamido, alkanoyloxy, sulfono, alkylsulfonyloxy, nitro, azido, sulphanyl, alkylthio, halogen, DNA intercalators). Thus, (1S,5R,6R,8R)-5-(2-cyanoethoxy(diisopropylamino)phosphinoxy)-6-(4,4'-dimethoxytrityloxymethyl)-8-(thymin-1-yl)-2,7-dioxabicyclo[3.3.0]nonane was prepd. and incorporated into oligodeoxyribonucleotides. The nucleotide analogs, LNAs (Locked Nucleoside Analogs), are able to provide valuable improvements to oligonucleotides with respect to affinity and specificity towards complementary RNA and DNA oligomers. The novel type of **LNA** modified oligonucleotides, as well as the LNAs as such, are useful in a wide range of diagnostic applications as well as therapeutic applications. Among these can be mentioned antisense applications, **PCR** applications, strand displacement oligomers, as substrates for nucleic acid polymerases, as nucleotide based drugs, etc.

L2 ANSWER 25 OF 33 MEDLINE

AN 1999218317 MEDLINE

DN 99218317 PubMed ID: 10200299

TI Distribution of human herpesvirus-8 latently infected cells in Kaposi's sarcoma, multicentric Castleman's disease, and primary effusion lymphoma.

AU Dupin N; Fisher C; Kellam P; Ariad S; Tulliez M; Franck N; van Marck E; Salmon D; Gorin I; Escande J P; Weiss R A; Alitalo K; Boshoff C

CS Departments of Oncology and Molecular Pathology, Royal Free and University College Medical School, UCL, London, United Kingdom W1P 6BT.

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1999 Apr 13) 96 (8) 4546-51.
Journal code: 7505876. ISSN: 0027-8424.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; AIDS

EM 199905

ED Entered STN: 19990601
Last Updated on STN: 20000303
Entered Medline: 19990517

AB Human herpesvirus 8 (HHV-8, also called KSHV) is linked to the etiopathogenesis of Kaposi's sarcoma (KS), multicentric Castleman's disease (MCD), and primary effusion lymphoma (PEL). The universal presence of HHV-8 in early KS has not yet been shown. We used a mAb (LN53) against latent nuclear antigen-1 (**LNA**-1) of HHV-8 encoded by ORF73 to study the distribution of the cell types latently infected by HHV-8 in patch, plaque, and nodular KS, MCD, and PEL. In early KS, HHV-8 is present in <10% of cells forming the walls of ectatic vessels. In nodular KS, HHV-8 is present in cells surrounding slit-like vessels and in >90% of spindle cells, but not in normal vascular endothelium. In addition, HHV-8 colocalizes with vascular endothelial growth factor receptor-3 (VEGFR-3), a marker of lymphatic and precursor endothelium. In early KS lesions, VEGFR-3 is more extensively expressed than **LNA**-1, indicating that HHV-8 is not inducing the proliferation of VEGFR-3-positive

endothelium directly. In MCD, HHV-8 is present in mantle zone large immunoblastic B cells. No staining for **LNA**-1 is seen in samples from multiple myeloma, prostate cancer, and angiosarcoma, supporting the absence of any etiological link between these diseases and HHV-8.

L2 ANSWER 26 OF 33 MEDLINE DUPLICATE 4
AN 2000012819 MEDLINE
DN 20012819 PubMed ID: 10545058
TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of **PCR** amplicons to photoimmobilized locked nucleic acids.
AU Orum H; Jakobsen M H; Koch T; Vuust J; Borre M B
CS PNA Diagnostics A/S, Ronnegade 2, DK-2100 Copenhagen, Denmark.. oerum@euroconnect.dk
SO CLINICAL CHEMISTRY, (1999 Nov) 45 (11) 1898-905.
Journal code: 9421549. ISSN: 0009-9147.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991118
AB BACKGROUND: Individuals carrying the factor V Leiden mutation have been shown to have an increased risk of developing venous thromboembolism. Our aim was to develop an ELISA-like assay to detect the mutation in **PCR**-amplified genomic DNA using novel, high-affinity DNA analogs, termed locked nucleic acids (LNAs). METHODS: **LNA** octamer probes complementary to the factor V wild-type or mutated sequence were covalently attached to individual wells of a microtiter plate. Biotinylated factor V amplicons were added, and hybridization to the immobilized **LNA** probes was scored colorimetrically using a horseradish peroxidase-anti-biotin Fab conjugate and tetramethylbenzidine substrate. RESULTS: In a prospective study of 53 patients, the assay reproducibly scored both factor V homozygotes and heterozygotes with excellent sensitivity and specificity. All results were in complete agreement with the results obtained with the conventional **PCR** -restriction fragment length polymorphism technique. CONCLUSIONS: The simplicity of the assay and its procedural relatedness to the widely used ELISA format should make it useful for routine factor V testing in the clinical laboratory.

L2 ANSWER 27 OF 33 MEDLINE
AN 1999445611 MEDLINE
DN 99445611 PubMed ID: 10515805
TI Molecular polymorphism of Kaposi's sarcoma-associated herpesvirus (Human herpesvirus 8) latent nuclear antigen: evidence for a large repertoire of viral genotypes and dual infection with different viral genotypes.
CM Erratum in: J Infect Dis 1999 Nov;180(5):1756
AU Gao S J; Zhang Y J; Deng J H; Rabkin C S; Flore O; Jenson H B
CS Division of Infectious Diseases, Dept. of Pediatrics, University of Texas Health Science Center at San Antonio, San Antonio, TX 78284-7811, USA.. gaos@uthscsa.edu
SO JOURNAL OF INFECTIOUS DISEASES, (1999 Nov) 180 (5) 1466-76.
Journal code: 0413675. ISSN: 0022-1899.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199912
ED Entered STN: 20000113

Last Updated on STN: 20000124
Entered Medline: 19991209

AB Molecular polymorphism was found in Kaposi's sarcoma-associated herpesvirus (KSHV) latent nuclear antigen (**LNA**), mapped to the internal repeat domain of the encoding orf73 gene, and used to develop a novel genotyping technique, KSHV **LNA** genotyping (KVNAtyping). KVNAtype was stable during latent and lytic viral replication in cell culture and in humans. Diverse KVNAtypes were identified in 43 specimens: 6 KSHV cell lines and 6 Kaposi's sarcoma (KS) and 4 primary effusion lymphoma (PEL) tumor samples from the United States, 15 KS tumor samples from Italy, and 12 KS tumor samples from Zambia. A single KVNAtype was detected in each of 41 specimens, and 2 KVNAtypes were detected in each of 2 KS specimens. Multifocal KS from 3 patients showed the same single KVNAtype at all sites in each patient. These results demonstrate a large repertoire of KSHV genotypes and suggest that the development of most KSs and PELs is associated with a single viral genotype.

L2 ANSWER 28 OF 33 MEDLINE
AN 1999332106 MEDLINE
DN 99332106 PubMed ID: 10405195
TI Deregulation of cyclooxygenase and nitric oxide synthase gene expression in the inflammatory cascade triggered by experimental group B streptococcal meningitis in the newborn brain and cerebral microvessels.
AU Hauck W; Samlalsingh-Parker J; Glibetic M; Ricard G; Beaudoin M C; Noya F J; Aranda J V
CS Department of Pharmacology, McGill University, Lady Davis Institute, Jewish General Hospital, Montreal, Canada.
SO SEMINARS IN PERINATOLOGY, (1999 Jun) 23 (3) 250-60. Ref: 92
Journal code: 7801132. ISSN: 0146-0005.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199908
ED Entered STN: 19990910
Last Updated on STN: 19990910
Entered Medline: 19990826

AB Group B Streptococcus (GBS) is the most common cause of neonatal sepsis and meningitis. Despite antibiotics, GBS in the newborn initiates a cascade of molecular and biological events leading to altered cerebral perfusion, blood-brain barrier disruption, cerebral edema, intracranial hypertension, neurological damage, and even death. Having previously shown that GBS infection impairs cerebral blood flow autoregulation and increases prostaglandin (PG) levels, we examined the regulation of some crucial inflammatory mediators (PGs, nitric oxide (NO), tumor necrosis factor-a) in the brain and cerebral microvessels (MVs) from newborn piglets. Cyclooxygenase (COX), the key enzyme in PG biosynthesis, exists in two isoforms, COX-1 and COX-2. Both may be directly induced by NO in a model of renal inflammation. Besides its neurotransmitter role, NO is a potent vasorelaxant whose production is catalyzed by at least three distinct nitric oxide synthases (NOS) (bNOS, ecNOS, iNOS). Western blot analyses showed that the newborn (4 day old) brain expressed lower levels of COX-1 (8-fold), COX-2 (20-fold), bNOS (12-fold), and ecNOS (5-fold) than in the 1 day old. MV showed approximately equal levels of COX-2, lower levels of COX-1 (4-fold), bNOS (5-fold), and higher levels of ecNOS (20-fold) in comparison to 4-day-old cerebral MV. A 4-day-old brain expressed lower levels of bNOS (5-fold), ecNOS (10-fold), and COX-1 (2-fold) than the 6-week-old pig. COX-2 protein was undetected in a 4-day-old pig brain, but present in great excess in MV. Purified MV showed lower ecNOS (14-fold), COX-1 (2-fold), and about equal levels of bNOS and

COX-2 in comparison with MV from 6-week-old pigs. Reverse transcription **polymerase chain** reaction analyses confirmed these results. Treatment with noo-nitro-L-arginine (**LNA**), a NOS inhibitor, downregulated COX-1 expression in the newborn brain and both COX-1 and COX-2 cerebral MV expression. GBS infection (10(9) colony-forming units, 0.5 mL intracerebroventricular) of sedated newborn piglets induced the expression of tumor necrosis factor-alpha in the cerebrospinal fluid after 2 hours, upregulated bNOS expression in both brain and MVs, upregulated ecNOS in MVs, and downregulated COX-1, COX-2, and ecNOS in the brain. GBS did not trigger the expression of iNOS. Our data suggest that there is a net deficiency of NOS isoforms in the immature brain and microvasculature of the 4-day-old piglet and that the differences in expression lead to the immature control of NO and PG production, rendering newborns particularly susceptible to neurological damage because of the undeveloped nature of their response mechanisms. Moreover, the GBS-induced cascade deregulates the gene expression of interacting inflammatory mediators and may cause a net vasoconstrictor/vasodilator imbalance, leading to cerebral hypertension and edema in the early stages of infection. Pharmacological manipulations of the inflammatory cascade could lead to novel therapeutic approaches for the treatment of GBS meningitis.

L2 ANSWER 29 OF 33 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:248292 BIOSIS
DN PREV199900248292
TI cDNA cloning of an adult male putative lipocalin specific to tergal gland aphrodisiac secretion in an insect (Leucophaea maderae.
AU Korchi, Ahmed; Brossut, Remy; Bouhin, Herve; Delachambre, Jean (1)
CS (1) Developpement-Communication chimique, Unite Mixte de Recherche 5548 Centre National de la Recherche Scientifique, Universite de Bourgogne, 6 Bd Gabriel, 21 000, Dijon France
SO FEBS Letters, (April 23, 1999) Vol. 449, No. 2-3, pp. 125-128. ISSN: 0014-5793.
DT Article
LA English
SL English
AB Lma-P22 is a cuticular surface protein specific to the tergal gland secretion of Leucophaea maderae adult males which is ingested by females just before copulation. The complete Lma-P22 cDNA sequence was determined by RT-**PCR** using primers based on Edman degradation fragments. The recombinant protein expressed in Escherichia coli was recognized by an anti-Lma-P22 antibody. Northern blot analysis indicates that the corresponding mRNA is transcribed only in the epidermis of male tergites. Sequence analysis indicated that Lma-P22 deduced protein belongs to the lipocalin family. Lipocalins are extracellular proteins which carry hydrophobic compounds and some of them can bind sexual pheromone in vertebrates. Lma-P22 is the first example of a lipocalin-like protein involved in insect sexual behavior.

L2 ANSWER 30 OF 33 MEDLINE DUPLICATE 5
AN 1999225649 MEDLINE
DN 99225649 PubMed ID: 10208923
TI Transcriptional analysis of human herpesvirus-8 open reading frames 71, 72, 73, K14, and 74 in a primary effusion lymphoma cell line.
AU Talbot S J; Weiss R A; Kellam P; Boshoff C
CS Department of Medical Microbiology, Medical School, The University of Edinburgh, Teviot Place, Edinburgh, EH8 9AG, United Kingdom.. s.talbot@ed.ac.uk
SO VIROLOGY, (1999 Apr 25) 257 (1) 84-94. Journal code: 0110674. ISSN: 0042-6822.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals; AIDS
EM 199905
ED Entered STN: 19990601
Last Updated on STN: 19990601
Entered Medline: 19990519
AB We examined the transcription and splicing of open reading frames (ORFs) 71 (K13)-74 of human herpesvirus-8 (HHV-8) in the primary effusion lymphoma cell line BCP-1 (latently infected with HHV-8), using a combination of NORTHERN blot analysis, RT-**PCR**, and rapid amplification of cDNA ends (**PCR**-RACE). The three genes encoded by ORFs 71, 72, and 73 [viral FLICE inhibitory protein (v-FLIP), v-cyclin, latent nuclear antigen (**LNA**)] are transcribed from a common transcription start site in BCP-1 cells uninduced (latent) or induced (lytic) with n-butyrate. The resulting transcript is spliced to yield a 5.32-kb message encoding **LNA**, v-cyclin, and v-FLIP and a 1.7-kb bicistronic message encoding v-cyclin and v-FLIP. The two genes encoded by ORFs K14 and 74 (v-Ox2 and v-GPCR) are transcribed as a 2.7-kb bicistronic transcript that is induced with n-butyrate. A small (149-bp) intron is spliced from the intragenic noncoding region immediately before the v-GPCR initiating codon. Examination of sequence elements in the promoter of the **LNA**/v-cyclin/v-FLIP operon revealed TAATGARAT and Octamer binding motifs characteristic of herpesvirus immediate-early genes. Sequence elements in the v-Ox2/v-GPCR promoter included AP1 and Zta-like (EBV Zebra transactivator) binding motifs consistent with the n-butyrate induction of this operon.

L2 ANSWER 31 OF 33 MEDLINE DUPLICATE 6
AN 1999324295 MEDLINE
DN 99324295 PubMed ID: 10393835
TI High expression of HHV-8-encoded ORF73 protein in spindle-shaped cells of Kaposi's sarcoma.
AU Katano H; Sato Y; Kurata T; Mori S; Sata T
CS Department of Pathology, National Institute of Infectious Diseases, University of Tokyo, Tokyo, Japan.
SO AMERICAN JOURNAL OF PATHOLOGY, (1999 Jul) 155 (1) 47-52.
Journal code: 0370502. ISSN: 0002-9440.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199907
ED Entered STN: 19990806
Last Updated on STN: 19990806
Entered Medline: 19990726
AB Human herpesvirus 8 (HHV-8) has been demonstrated previously in Kaposi's sarcoma (KS) tissues by immunohistochemistry, in situ **polymerase chain** reaction, and in situ hybridization. The HHV-8-encoded protein ORF73 is a 222- or 234-kd protein named latent nuclear antigen (**LNA**) or latency-associated nuclear antigen (LANA) that is identified in HHV-8-infected cell lines by immunofluorescence assay. In the present study, a rabbit antibody against a recombinant ORF73 protein was developed. Immunofluorescent staining of a HHV-8-infected cell line, TY-1, showed that the staining pattern of the anti-ORF73 antibody overlapped completely the LANA staining pattern obtained using KS patients' sera. Immunoblotting analysis showed that the anti-ORF73 antibody reacted specifically with 222- and 234-kd proteins that were present in TY-1 and BCBL-1 cell lysates. Immunohistochemistry using a catalyzed signal amplification system demonstrated that the anti-ORF73 antibody reacted exclusively with the majority of KS spindle-shaped cells, showing a nuclear dot-like staining pattern. Some of the ORF73

protein-positive cells also expressed CD34 and vimentin but not CD68 or factor-VIII-related antigen. These data indicate that the anti-ORF73 antibody recognizes LANA and that most KS cells are infected with HHV-8 in the latent phase. Our findings also suggest that ORF73 protein plays an important role in the pathogenesis of KS.

L2 ANSWER 32 OF 33 MEDLINE
AN 97249320 MEDLINE
DN 97249320 PubMed ID: 9123902
TI [The use of B1-**PCR** method for studying the genomic polymorphism involved in malignant growth].
Ispol'zovanie metoda v1-ptsr dlia izucheniia genomnogo polimorfizma pri zlokachestvennom roste.
AU Aleksandrova S A; Ermilov A N; Kisliakova T V; Artsybasheva I V; Shvemberger I N
SO VOPROSY ONKOLOGII, (1996) 42 (6) 48-52.
Journal code: 0413775. ISSN: 0507-3758.
CY RUSSIA: Russian Federation
DT Journal; Article; (JOURNAL ARTICLE)
LA Russian
FS Priority Journals
EM 199704
ED Entered STN: 19970506
Last Updated on STN: 19970506
Entered Medline: 19970424
AB The BI-PCT method showed the profile of BI-associated fragments of **LNA** in the cell line of the mouse hepatoma MH-22a to differ from that of the liver cells of C3HA mice, hepatoma cells incorporating the DNA fragments with 450 bp and those with 600bp disappearing. Application of the same method failed to reveal any differences in the profiles of BI-associated DNA fragments in the differentiated and non-differentiated cells of the embryonal carcinoma F9 induced by retinoic acid and cAMP dibutyryl treatment. It is suggested that the spectra of BI-associated DNA fragments might correlate with genetic stability in tumor cells.

L2 ANSWER 33 OF 33 MEDLINE
AN 95065135 MEDLINE
DN 95065135 PubMed ID: 7974790
TI [The polymorphism of the tandem repeats in the dystrophin gene in the Ukrainian population].
Polimorfizm tandemnykh povtorov gena distrofina v populiatsii naseleniia Ukrainy.
AU Livshits L A; Grishko V I; Maliarchuk S G; Kravchenko S A
SO TSITOLOGIIA I GENETIKA, (1994 May-Jun) 28 (3) 79-85.
Journal code: 0101671. ISSN: 0564-3783.
CY Ukraine
DT Journal; Article; (JOURNAL ARTICLE)
LA Russian
FS Priority Journals
EM 199412
ED Entered STN: 19950110
Last Updated on STN: 19950110
Entered Medline: 19941223
AB The genetic heterogeneity of populations of different regions of Ukraine was studied using four polymorphic **LNA** sequences (GTAA-tandem repeats from the 3'-untranslated region of the dystrophin gene, the polymorphic systems pERT87-15--BamHI, pERT8718--TaqI, and pERT87-15--XmnI of the pERT locus of human chromosome X). We analyzed 500 DNA samples of healthy donors from the Kiev, Lvov, Poltava, and Lugansk regions. The above-mentioned polymorphic DNA sequences were used as markers to determine genetic distances between the regional populations of Ukraine. The data obtained indicate the existence of significant genetic

differences among the regional populations of Ukraine. DNA polymorphism in the pERT87-8--TaqI system contributes the most significantly to these differences.

=> d 10 bib ab

L2 ANSWER 10 OF 33 MEDLINE
AN 2002444795 MEDLINE
DN 22191999 PubMed ID: 12202779
TI Single nucleotide polymorphism genotyping using short, fluorescently labeled locked nucleic acid (**LNA**) probes and fluorescence polarization detection.
AU Simeonov Anton; Nikiforov Theo T
CS Caliper Technologies Corporation, Mountain View, CA 94043, USA.
SO NUCLEIC ACIDS RESEARCH, (2002 Sep 1) 30 (17) e91.
Journal code: 0411011. ISSN: 1362-4962.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200211
ED Entered STN: 20020831
Last Updated on STN: 20021212
Entered Medline: 20021112
AB Locked nucleic acids (LNAs) are synthetic nucleic acid analogs that bind to complementary target molecules (DNA, RNA or **LNA**) with very high affinity. At the same time, this binding affinity is decreased substantially when the hybrids thus formed contain even a single mismatched base pair. We have exploited these properties of **LNA** probes to develop a new method for single nucleotide polymorphism genotyping. In this method, very short (hexamer or heptamer) **LNA** probes are labeled with either rhodamine or hexachlorofluorescein (HEX), and their hybridization to target DNAs is followed by measuring the fluorescence polarization (FP) of the dyes. The formation of perfectly complementary double-stranded hybrids gives rise to significant FP increases, whereas the presence of single mismatches results in very small or no changes of this parameter. Multiplexing of the assay can be achieved by using differentially labeled wild-type and mutant specific probes in the same solution. The method is homogeneous, and because of the use of extremely short **LNA** probes, the generation of a universal set of genotyping reagents is possible.

=> s (PCR or polymerase(w)chain) and Locked(w)nucleic
L3 13 (PCR OR POLYMERASE(W) CHAIN) AND LOCKED(W) NUCLEIC

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 11 DUP REM L3 (2 DUPLICATES REMOVED)

=> d 1-11 ti

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI G protein-coupled receptor (GPCR) microarrays for determination of GPCR gene expression profiles and uses in drug and toxin screening and diagnostics

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Transporter microarrays for the determination of transporter gene expression profiles and uses in drug and toxin screening and diagnostics

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Ion channel microarrays for the determination of ion channel gene expression profiles and uses in drug and toxin screening and diagnostics

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI LNA helper probes for detection of a single nucleotide polymorphism by a capture oligonucleotide

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Genotyping of the apolipoprotein B R3500Q mutation using immobilized **locked nucleic** acid capture probes

L4 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Down-regulation of VEGF mRNA expression by 2'-O,4'-C-ethylene-bridged nucleic acid (ENA) antisense oligonucleotides and investigation of non-target gene expression

L4 ANSWER 7 OF 11 MEDLINE
TI Single nucleotide polymorphism genotyping using short, fluorescently labeled **locked nucleic** acid (LNA) probes and fluorescence polarization detection.

L4 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI High throughput multiplex genotyping using chimeric LNA (**Locked Nucleic** Acids)/DNA oligos immobilized on a polymer microchip.

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI One-step sample preparation and detection of nucleic acids in complex biological samples using **locked nucleic** acid primers

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Detection of mutations in genes by allele-specific **PCR** using primers containing ribose analogs that limit conformational flexibility

L4 ANSWER 11 OF 11 MEDLINE DUPLICATE 1
TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of **PCR** amplicons to photoimmobilized **locked nucleic** acids.

=> d 9-11 bib ab

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 2000:688401 CAPLUS
DN 133:262258
TI One-step sample preparation and detection of nucleic acids in complex biological samples using **locked nucleic** acid primers
IN Skouv, Jan
PA Exiqon A/S, Den.
SO PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000056920	A1	20000928	WO 2000-DK128	20000317

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT,

TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1161561 A1 20011212 EP 2000-910584 20000317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 2002539802 T2 20021126 JP 2000-606779 20000317

US 6303315 B1 20011016 US 2000-528271 20000318

PRAI DK 1999-384 A 19990318

US 1999-127356P P 19990401

WO 2000-DK128 W 20000317

AB A method for simultaneous release and detection of nucleic acids from complex biol. samples is described. The invention relates to the combined use of lysis buffers contg. strong chaotropic agents such as guanidine thiocyanate to facilitate cell lysis and release of cellular nucleic acids and to the use of a novel type of bicyclic nucleotide analogs, **locked nucleic** acid (LNA) to detect specific nucleic acids released during lysis by nucleic acid hybridization. In particular methods are described for the covalent attachment of the catching LNA-oligo. Novel methods for sample prepn. of e.g. polyadenylated mRNA species are also presented. The invention further addresses reagents for performing the methods as well as reagents and applications of the method. Chaotropic denaturants are shown to improve the specificity of probe hybridization to a target sequence. This allows the efficient capture of sequences labeled with a **locked nucleic** acid probe, e.g. for **PCR**. Expts. optimizing hybridization conditions using LNA probes in the presence of guanidinium salts are described.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS

AN 2000:688397 CAPLUS

DN 133:262257

TI Detection of mutations in genes by allele-specific **PCR** using primers containing ribose analogs that limit conformational flexibility

IN Skouv, Jan; Fenger, Mogens; Jacobsen, Mogens Havsteen

PA Exiqon A/S, Den.

SO PCT Int. Appl., 70 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000056916	A2	20000928	WO 2000-DK127	20000317
WO 2000056916	A3	20010208		

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1161554 A2 20011212 EP 2000-910583 20000317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 2002539801 T2 20021126 JP 2000-606775 20000317

	US 6316198	B1	20011113	US 2000-528115	20000318
	US 2002115080	A1	20020822	US 2001-932058	20010816
PRAI	DK 1999-383	A	19990318		
	US 1999-127354P	P	19990401		
	WO 2000-DK127	W	20000317		
	US 2000-528115	A1	20000318		

AB An allele-specific **PCR** method of detecting variant nucleic acids that differ from a control sequence at one or more positions is described. The method uses a primers that contain modified ribose moieties (Markush given) in the backbone that alter the conformational flexibility of the primer called **locked nucleic** acids (LNAs). LNA oligomers obey the Watson-Crick base-pairing rules and form duplexes that are significantly more stable than similar duplexes formed by DNA. The allele-specific primers have the LNA moieties at the 3' end of the primer. Thus discrimination between alleles without subsequent differential hybridization with labeled oligonucleotides is possible. These primers can be used in other amplification procedures, such as the ligase chain reaction. The invention further relates to reagents for performing the methods as well as applications of the method. Use of these primers to detect alleles of the ApoB gene is demonstrated.

L4 ANSWER 11 OF 11 MEDLINE DUPLICATE 1
AN 2000012819 MEDLINE
DN 20012819 PubMed ID: 10545058
TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of **PCR** amplicons to photoimmobilized **locked nucleic** acids.
AU Orum H; Jakobsen M H; Koch T; Vuust J; Borre M B
CS PNA Diagnostics A/S, Ronnegade 2, DK-2100 Copenhagen, Denmark.. oerum@euroconnect.dk
SO CLINICAL CHEMISTRY, (1999 Nov) 45 (11) 1898-905.
Journal code: 9421549. ISSN: 0009-9147.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991118
AB BACKGROUND: Individuals carrying the factor V Leiden mutation have been shown to have an increased risk of developing venous thromboembolism. Our aim was to develop an ELISA-like assay to detect the mutation in **PCR**-amplified genomic DNA using novel, high-affinity DNA analogs, termed **locked nucleic** acids (LNAs). METHODS: LNA octamer probes complementary to the factor V wild-type or mutated sequence were covalently attached to individual wells of a microtiter plate. Biotinylated factor V amplicons were added, and hybridization to the immobilized LNA probes was scored colorimetrically using a horseradish peroxidase-anti-biotin Fab conjugate and tetramethylbenzidine substrate. RESULTS: In a prospective study of 53 patients, the assay reproducibly scored both factor V homozygotes and heterozygotes with excellent sensitivity and specificity. All results were in complete agreement with the results obtained with the conventional **PCR**-restriction fragment length polymorphism technique. CONCLUSIONS: The simplicity of the assay and its procedural relatedness to the widely used ELISA format should make it useful for routine factor V testing in the clinical laboratory.

=> s (locked (w) nucleic) and py<1999
2 FILES SEARCHED...

L5 12 (LOCKED (W) NUCLEIC) AND PY<1999

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 8 DUP REM L5 (4 DUPLICATES REMOVED)

=> d 1-8 bib ab

L6 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1998:771986 CAPLUS
DN 130:139574
TI LNA (**Locked Nucleic** Acid): An RNA Mimic Forming Exceedingly Stable LNA:LNA Duplexes
AU Koshkin, Alexei A.; Nielsen, Poul; Meldgaard, Michael; Rajwanshi, Vivek K.; Singh, Sanjay K.; Wengel, Jesper
CS Center for Synthetic Bioorganic Chemistry Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Journal of the American Chemical Society (**1998**), 120(50), 13252-13253
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB **Locked nucleic** acids, contg. 2'-O-,4'-C-methylene linked bicyclic ribofuranosyl nucleosides (I), have become interesting structures in the search for nucleic acid mimics capable of finding strongly to DNA or RNA complements. LNA:LNA hybridization was shown to be the most thermally stable nucleic acid type duplex system, and the RNA-mimicking character of LNA was established at the duplex level. Introduction of 3 LNA monomers (TL or AL) induced significantly increase MPs (.DELTA.Tm = +15.degree./+11.degree.) toward DNA complements. The universality of LNA-mediated hybridization has been stressed by the formation of exceedingly stable LNA:LNA duplexes. The RNA-mimicking of LNA was reflected with regard to the N-type conformational restriction of the monomers and to the secondary structure of the LNA:RNA duplex. The general LNA hybridization proceeded by duplex formation via Watson-Crick H-bonding in a predictable manner, establishing the development of LNA as an important example of biomimetic chem.
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1998:752618 CAPLUS
DN 130:110548
TI Synthesis of 2'-Amino-LNA: A Novel Conformationally Restricted High-Affinity Oligonucleotide Analog with a Handle
AU Singh, Sanjay K.; Kumar, Ravindra; Wengel, Jesper
CS Center for Synthetic Bioorganic Chemistry Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Journal of Organic Chemistry (**1998**), 63(26), 10035-10039
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
AB 2'-Amino- and 2'-methylamino-**locked nucleic** acids (2'-amino-LNA) contg. monomer nucleoside I (R = Me, COCF3) were prepd. and thermal stability of their duplexes with complementary RNA and DNA strands are reported.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2002 ACS

AN 1998:503335 CAPLUS
DN 129:260722
TI Synthesis of novel bicyclo[2.2.1] ribonucleosides: 2'-amino- and 2'-thio-LNA monomeric nucleosides
AU Singh, Sanjay K.; Kumar, Ravindra; Wengel, Jesper
CS Center for Synthetic Bioorganic Chemistry Department of Chemistry Chemical Laboratory II, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Journal of Organic Chemistry (**1998**), 63(18), 6078-6079
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 129:260722
AB **Locked nucleic** acids (LNA) as a novel class of preorganized oligonucleotide analogs showed very interesting properties. LNA nucleosides I (R = Me or H, Y = NH or S) were prepd. by condensation, deacetylation, tosylation, ring closure and debenzylation. The synthetic route devised in this report gives convenient access to 2'-heteroatom substituted LNA pyrimidine nucleosides and should in addn. also be applicable for synthesis of other bicyclic pyrimidine nucleoside analogs.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 1998:313398 BIOSIS
DN PREV199800313398
TI Novel convenient synthesis of LNA (2.2.1)bicyclo nucleosides.
AU Koshkin, Alexei A.; Rajwanshi, Vivek K.; Wengel, Jesper (1)
CS (1) Dep. Chem., Chem. Lab. II, Univ. Copenhagen, Universitetsparken 5, DK-2100 Copenhagen Denmark
SO Tetrahedron Letters, (**June 11, 1998**) Vol. 39, No. 24, pp. 4381-4384.
ISSN: 0040-4039.
DT Article
LA English
AB LNA (**Locked Nucleic** Acids) is a novel oligonucleotide analogue containing (2.2.1)bicyclo nucleoside monomers. A novel and significantly improved method for convergent synthesis of LNA (2.2.1)bicyclo nucleosides using a 4-C-tosyloxymethyl-1,2-di-O-acetyl furanose as a key synthon is described. In addition, an alternative, robust linear approach allowing selective formation of the desired (2.2.1)bicyclo LNA nucleosides via a tricyclic nucleoside intermediate is introduced.

L6 ANSWER 5 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 1998:205831 BIOSIS
DN PREV199800205831
TI LNA (**Locked Nucleic** Acids): Synthesis of the adenine, cytosine, guanine, 5-methylcytosine, thymine and uracil bicyclonucleoside monomers, oligomerisation, and unprecedented nucleic acid recognition.
AU Koshkin, Alexei A.; Singh, Sanjay K.; Nielsen, Poul; Rajwanshi, Vivek K.; Kumar, Ravindra; Meldgaard, Michael; Olsen, Carl Erik; Wengel, Jesper (1)
CS (1) Dep. Chem., Univ. Copenhagen, Universitetsparken 5, DK-2100 Copenhagen Denmark
SO Tetrahedron, (**April, 1998**) Vol. 54, No. 14, pp. 3607-3630.
ISSN: 0040-4020.
DT Article
LA English
AB LNA (**Locked Nucleic** Acids), consisting of 2'-O,4'-C-methylene bicyclonucleoside monomers, is efficiently synthesized and its nucleic acid recognition potential evaluated for six different nucleobases, namely adenine, cytosine, guanine, 5-methylcytosine, thymine

and uracil. Unprecedented increases (+3 to +8 degreeC per modification) in the thermal stability of duplexes towards both DNA and RNA were obtained when evaluating mixed sequences of partly or fully modified LNA. Studies of mismatched sequences show that LNA obey the Watson-Crick base pairing rules with generally improved selectivities compared to the corresponding unmodified reference strands.

L6 ANSWER 6 OF 8 MEDLINE DUPLICATE 3
AN 1999090202 MEDLINE
DN 99090202 PubMed ID: 9873516
TI The first analogues of LNA (**locked nucleic** acids): phosphorothioate-LNA and 2'-thio-LNA.
AU Kumar R; Singh S K; Koshkin A A; Rajwanshi V K; Meldgaard M; Wengel J
CS Department of Chemistry, University of Copenhagen, Denmark.
SO BIOORGANIC AND MEDICINAL CHEMISTRY LETTERS, **(1998 Aug 18)** 8 (16) 2219-22.
Journal code: 9107377. ISSN: 0960-894X.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199901
ED Entered STN: 19990209
Last Updated on STN: 19990209
Entered Medline: 19990128
AB LNA (**Locked Nucleic** Acids, 1, X = O, Y = O) is a novel oligonucleotide analogue capable of recognizing complementary DNA and RNA with unprecedented thermal affinities. Synthesis of the first chemically modified LNA analogues is reported. A 9-mer phosphorothioate-LNA containing three LNA thymine monomers (1, X = O, Y = S, Base = thymin-1-yl) and 9-mer LNAs containing one, three or five 2'-thio-LNA monomers (1, X = S, Y = O, Base = uracil-1-yl) were able to recognize both complementary DNA and RNA with thermal affinities comparable to those of parent LNA.

L6 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1998:362973 CAPLUS
DN 129:149173
TI Universality of LNA-mediated high-affinity nucleic acid recognition
AU Singh, Sanjay K.; Wengel, Jesper
CS Department of Chemistry, University of Copenhagen Centre for Synthetic Bioorganic Chemistry, Copenhagen, DK-2100, Den.
SO Chemical Communications (Cambridge) (**1998**), (12), 1247-1248
CODEN: CHCOFS; ISSN: 1359-7345
PB Royal Society of Chemistry
DT Journal
LA English
AB LNA (**locked nucleic** acid) is a novel class of nucleic acid mimic structurally closely resembling RNA. Incorporation of three LNA monomers together with six ribonucleotide monomers afforded the first ribo-LNA sequence. Unprecedented thermal stabilities of duplexes towards complementary DNA and RNA without compromising base-pairing selectivity were obtained for ribo-LNA, thus establishing the universality of LNA-mediated efficient targeting of natural nucleic acids.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1998:164474 CAPLUS
DN 129:1792
TI LNA (**locked nucleic** acids): synthesis and high-affinity nucleic acid recognition

AU Singh, Sanjay K.; Nielsen, Poul; Koshkin, Alexei A.; Wengel, Jesper
CS Dep. Chem., Univ. Copenhagen, Copenhagen, DK-2100, Den.
SO Chemical Communications (Cambridge) (**1998**), (4), 455-456
CODEN: CHCOFS; ISSN: 1359-7345
PB Royal Society of Chemistry
DT Journal
LA English
AB A novel class of nucleic acid analogs, termed LNA (**locked nucleic** acids), is introduced. Following the Watson-Crick base pairing rules, LNA forms duplexes with complementary DNA and RNA with remarkably increased thermal stabilities and generally improved selectivities.
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l6 and polymerase#
L7 0 L6 AND POLYMERASE#

=> s locked (w) nucleic and polymerase#
L8 16 LOCKED (W) NUCLEIC AND POLYMERASE#

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9 14 DUP REM L8 (2 DUPLICATES REMOVED)

=> d 1-14 ti

L9 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Sequence analysis of nucleic acids by primer extension of mismatched bases and its application to single nucleotide polymorphisms

L9 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI G protein-coupled receptor (GPCR) microarrays for determination of GPCR gene expression profiles and uses in drug and toxin screening and diagnostics

L9 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Transporter microarrays for the determination of transporter gene expression profiles and uses in drug and toxin screening and diagnostics

L9 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Ion channel microarrays for the determination of ion channel gene expression profiles and uses in drug and toxin screening and diagnostics

L9 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Double D-loop formation in duplex nucleic acid with recombinase and modified oligonucleotides and applications

L9 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI LNA helper probes for detection of a single nucleotide polymorphism by a capture oligonucleotide

L9 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Genotyping of the apolipoprotein B R3500Q mutation using immobilized **locked nucleic** acid capture probes

L9 ANSWER 8 OF 14 MEDLINE
TI Single nucleotide polymorphism genotyping using short, fluorescently labeled **locked nucleic** acid (LNA) probes and fluorescence polarization detection.

L9 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI A method of increasing the specificity of oxy-LNA with nonoxy-LNA monomers

L9 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Method for detecting nucleic acid target sequences involving in vitro transcription from an RNA **polymerase** promoter

L9 ANSWER 11 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI High throughput multiplex genotyping using chimeric LNA (**Locked Nucleic** Acids)/DNA oligos immobilized on a polymer microchip.

L9 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI One-step sample preparation and detection of nucleic acids in complex biological samples using **locked nucleic** acid primers

L9 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2002 ACS
TI Detection of mutations in genes by allele-specific PCR using primers containing ribose analogs that limit conformational flexibility

L9 ANSWER 14 OF 14 MEDLINE DUPLICATE 1
TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of PCR amplicons to photoimmobilized **locked nucleic** acids.

=> d 11-13 bib ab

L9 ANSWER 11 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:554877 BIOSIS
DN PREV200100554877
TI High throughput multiplex genotyping using chimeric LNA (**Locked Nucleic** Acids)/DNA oligos immobilized on a polymer microchip.
AU Vissing, H. (1); Nielsen, A. T. (1); Noerholm, M. (1); Mouritzen, P. (1); Hoejby, P. E. (1); Pedersen, S. (1); Choleva, Y. (1); Andersen, M. S. (1); Kolberg, J. G. (1); Haagesen, K. H. (1); Kongsbak, L. (1)
CS (1) Bioinformatics/Genomics, Euray, EXIQON A/S, Vedbaek Denmark
SO American Journal of Human Genetics, (October, 2001) Vol. 69, No. 4 Supplement, pp. 470. print.
Meeting Info.: 51st Annual Meeting of the American Society of Human Genetics San Diego, California, USA October 12-16, 2001
ISSN: 0002-9297.
DT Conference
LA English
SL English

L9 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 2000:688401 CAPLUS
DN 133:262258
TI One-step sample preparation and detection of nucleic acids in complex biological samples using **locked nucleic** acid primers
IN Skouv, Jan
PA Exiqon A/S, Den.
SO PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000056920	A1	20000928	WO 2000-DK128	20000317
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB,				

GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO,
NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT,
TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1161561	A1	20011212	EP 2000-910584	20000317	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2002539802	T2	20021126	JP 2000-606779	20000317	
US 6303315	B1	20011016	US 2000-528271	20000318	
PRAI DK 1999-384	A	19990318			
US 1999-127356P	P	19990401			
WO 2000-DK128	W	20000317			

AB A method for simultaneous release and detection of nucleic acids from complex biol. samples is described. The invention relates to the combined use of lysis buffers contg. strong chaotropic agents such as guanidine thiocyanate to facilitate cell lysis and release of cellular nucleic acids and to the use of a novel type of bicyclic nucleotide analogs, **locked nucleic** acid (LNA) to detect specific nucleic acids released during lysis by nucleic acid hybridization. In particular methods are described for the covalent attachment of the catching LNA-oligo. Novel methods for sample prepn. of e.g. polyadenylated mRNA species are also presented. The invention further addresses reagents for performing the methods as well as reagents and applications of the method. Chaotropic denaturants are shown to improve the specificity of probe hybridization to a target sequence. This allows the efficient capture of sequences labeled with a **locked nucleic** acid probe, e.g. for PCR. Expts. optimizing hybridization conditions using LNA probes in the presence of guanidinium salts are described.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 2000:688397 CAPLUS
DN 133:262257
TI Detection of mutations in genes by allele-specific PCR using primers containing ribose analogs that limit conformational flexibility
IN Skouv, Jan; Fenger, Mogens; Jacobsen, Mogens Havsteen
PA Exiqon A/S, Den.
SO PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000056916	A2	20000928	WO 2000-DK127	20000317
WO 2000056916	A3	20010208		

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN,
CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB,
GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO,
NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT,
TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1161554	A2	20011212	EP 2000-910583	20000317

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

	JP 2002539801	T2	20021126	JP 2000-606775	20000317
	US 6316198	B1	20011113	US 2000-528115	20000318
	US 2002115080	A1	20020822	US 2001-932058	20010816
PRAI	DK 1999-383	A	19990318		
	US 1999-127354P	P	19990401		
	WO 2000-DK127	W	20000317		
	US 2000-528115	A1	20000318		

AB An allele-specific PCR method of detecting variant nucleic acids that differ from a control sequence at one or more positions is described. The method uses a primers that contain modified ribose moieties (Markush given) in the backbone that alter the conformational flexibility of the primer called **locked nucleic** acids (LNAs). LNA oligomers obey the Watson-Crick base-pairing rules and form duplexes that are significantly more stable than similar duplexes formed by DNA. The allele-specific primers have the LNA moieties at the 3' end of the primer. Thus discrimination between alleles without subsequent differential hybridization with labeled oligonucleotides is possible. These primers can be used in other amplification procedures, such as the ligase chain reaction. The invention further relates to reagents for performing the methods as well as applications of the method. Use of these primers to detect alleles of the ApoB gene is demonstrated.

=> d 14 bib ab

L9 ANSWER 14 OF 14 MEDLINE DUPLICATE 1
AN 2000012819 MEDLINE
DN 20012819 PubMed ID: 10545058
TI Detection of the factor V Leiden mutation by direct allele-specific hybridization of PCR amplicons to photoimmobilized **locked nucleic** acids.
AU Orum H; Jakobsen M H; Koch T; Vuust J; Borre M B
CS PNA Diagnostics A/S, Ronnegade 2, DK-2100 Copenhagen, Denmark.. oerum@euroconnect.dk
SO CLINICAL CHEMISTRY, (1999 Nov) 45 (11) 1898-905.
Journal code: 9421549. ISSN: 0009-9147.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991118
AB BACKGROUND: Individuals carrying the factor V Leiden mutation have been shown to have an increased risk of developing venous thromboembolism. Our aim was to develop an ELISA-like assay to detect the mutation in PCR-amplified genomic DNA using novel, high-affinity DNA analogs, termed **locked nucleic** acids (LNAs). METHODS: LNA octamer probes complementary to the factor V wild-type or mutated sequence were covalently attached to individual wells of a microtiter plate. Biotinylated factor V amplicons were added, and hybridization to the immobilized LNA probes was scored colorimetrically using a horseradish peroxidase-anti-biotin Fab conjugate and tetramethylbenzidine substrate. RESULTS: In a prospective study of 53 patients, the assay reproducibly scored both factor V homozygotes and heterozygotes with excellent sensitivity and specificity. All results were in complete agreement with the results obtained with the conventional PCR-restriction fragment length polymorphism technique. CONCLUSIONS: The simplicity of the assay and its procedural relatedness to the widely used ELISA format should make it

useful for routine factor V testing in the clinical laboratory.

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	87.19	87.40

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.82	-6.82

FILE 'STNGUIDE' ENTERED AT 13:14:21 ON 19 DEC 2002

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Dec 13, 2002 (20021213/UP)